1. MAGNETOSTATICS

1.1 THE GENERALISED FINITE ELEMENT METHOD AND ELECTRO MAGNETIC PROBLEMS. (invited)
O.C. Zienkiewicz, University College of Swansea, England.

1.2 THE SOLUTION OF 3D MAGNETOSTATIC PROBLEMS USING SCALAR POTENTIALS.
A.G. Armstrong, C.J. Collie, J. Simkin, C.W. Trowbridge, Rutherford Lab., Chilton, Oxon, England.

1.3 CALCULATION OF THE MAGNETIC FIELD OF THE ISOCHRONOUS CYCLOTRON SECTOR MAGNET BY THE INTEGRAL EQUATION METHOD.
P.G. Akishin, S.B. Vorozhtsov, E.P. Zhidkov, Joint Institute For Nuclear Research, Dubna, USSR.

1.4 INTEGRAL METHODS FOR THE CALCULATION OF MAGNETIC FIELDS IN TURBOGENERATOR.
R.J. Jackson, CEGB Leatherhead, England.

1.5 A COMPARISON OF TWO METHODS OF FIELD SOLUTION FOR SLOTTED BOUNDARY SHAPES IN TWO DIMENSIONS.
K.J. Binns, P.A. Kahan, J. Simkin*, C.W. Trowbridge*, University of Southampton, England and* Rutherford Lab., Chilton, England

1.6 A MONTE-CARLO METHOD FOR SURFACE FIELD CALCULATIONS.
J.H. Pickles, CEGB, Leatherhead, England

2. MAGNETOSTATICS

2.1 A REVIEW OF SOME RECENT DEVELOPMENTS IN THE SOLUTION OF LARGE SYSTEMS OF EQUATIONS. (invited)
D. Jacobs, CEGB, Leatherhead, England.

2.2 AN ISOPARAMETRIC FE PROGRAM FOR 2D NON LINEAR MAGNETOSTATIC FIELDS.
V. Hoppe, B & W Eng. Copenhagen, Denmark.

2.3 A CLASS OF METHODS FOR SOLVING 2D LINEAR AND NON LINEAR STEADY STATE AND TRANSIENT PROBLEMS
A.G. Jack, R.L. Stoll, Parsons, Newcastle upon Tyne, England.

2.4 SUR LA RESOLUTION DES SYSTEMES LINEAIRES PROVENANT DE L'UTILISATION DE LA METHODE DES ELEMENTS FINIS, PAR LA METHODE SEMI-DIRECTE DE STONE.
H. Froidevaux, A. Randriamora, Ecole Polytechnique Fédérale, Lausanne, Switzerland.

2.5 MAGGY2 AND PADDY PROGRAM PACKAGES FOR 2 AND 3 DIMENSIONAL MAGNETOSTATIC PROBLEMS.
S. J. Polak, A. De Beer, A. Wachters, J.V. Van Welij, Philips, Eindhoven, The Netherlands.

2.6 STRUCTURE OF AN ARRAY PROCESSOR FOR PARALLEL COMPUTATION OF MAGNETIC FIELDS.
A.U. Luccio, G.M. Piacentino, INFN, Frascati, Roma, Italy.

3. MAGNETODYNAMICS

3.1 FINITE ELEMENT FORMULATIONS OF TIME VARYING MAGNETIC FIELD PROBLEMS. (invited)
Z.J. Czendes, General Electric, Schenectady, U.S.A.

3.2 LAYER THEORY ANALYSIS FOR INTEGRAL BAR INDUCTION DEVICES.
S. Williamson, A.C. Smith, University of Aberdeen, England.

3.3 SURFACE ELEMENT MODELS OF CONDUCTING PLATES.
C.J. Carpenter, K.O. Sharples*, Imperial College, London, England and* City University, London, England.

3.4 FINITE ELEMENT MODELS OF EXTERIOR REGIONS CONTAINING MOVING CONDUCTORS.
D.A. Lowther, P.P. Silvester*, Imperial College, London, England and* Mc Gill University, Montreal, Canada.

3.5 DEVELOPMENTS IN THE RUTHERFORD LAB EDDY CURRENT PROGRAM.
C.S. Biddlecombe, Rutherford Lab., Chilton, Oxon, England.

3.6 THE EFFECTS OF GAPS BETWEEN LAMINATIONS ON AXIAL FLUX AND EDDY CURRENTS IN AN IDEALIZED STATOR CORE.
T.G. Phemister, C. Wymer, Parsons, Newcastle upon Tyne, England.

4. COMPUTER AIDED DESIGN

4.1 ETAT DE L'ART DANS LE DOMAINE DE L'INFOGRAPHIE INTERACTIVE. (invited)
M. Luças, Mathématiques Appliquées, Grenoble, France.

4.2 EXPERIENCE WITH A DISTRIBUTED COMPUTING SYSTEM FOR MAGNETIC FIELD ANALYSIS.
M. Newman, Rutherford Lab., Chilton, Oxon, England.

4.3 DEFINITION AND DRAWING OF ELECTROTECHNICAL DEVICES FOR FIELD CALCULATIONS.
B. Ancelle, ENSEGP, Grenoble, France.

4.4 DEVELOPMENTS OF THE EDDY-CURRENT PROGRAM EDDYNET.
L.R. Turner, R.J. Lari, Argonne National Lab., Illinois, USA.

4.5 INTERACTIVE COMPUTER TECHNIQUE IN 3D MODELISATION OF FIELD PROBLEMS BY FINITE ELEMENT METHOD.
P. Rafinejad, J.L. Coulomb, ENSEGP, Grenoble, France.

5. ELECTRICAL POWER MACHINES PANEL

5.1 PRACTICAL SOLUTIONS OF EDDY CURRENTS PROBLEMS BY FINITE ELEMENTS.
O.W. Andersen, K.G. Fehrle*, Norwegian Inst. of Technology, Trondheim, Norway,* General Electric Co, Philadelphia, USA.

5.2 CALCUL DES GRANDEURS ELECTROMAGNETIQUES THERMIQUES ET MECANIQUES LORS DU DEMARRAGE ASYNCHRONE DES MACHINES SYNCHRONES A POLES SAILLANTS MASSIFS. VERIFICATIONS EXPERIMENTALES.
P. Barret, J. Planchard, Y. Colot, D. Hutzler, J.Y. Bidan, EDF, Clamart, France.

5.3 FLUX DISTRIBUTION IN TRANSFORMER CORES.
A. Basak, C.R.G. Higgs, A.J. Moses, University College, Cardiff, England.

5.4 TWO DIMENSIONAL FLUX PENETRATION INTO SATURATING IRON.
E.M. Deeley, D.A. Lowther*, King's College, London,* Imperial College, London, England.

5.5 PROCEDE D'ANALYSE DES CHAMPS ELECTRIQUES ET MAGNETIQUES DANS LES STRUCTURES PLANES ET DE REVOLUTION. PROGRAMME DIFIMEDI.
M. Lajoie-Mazenc, J. Hector, R. Carlson, LEEI, INPT, Toulouse, France.

5.6 COMPUTATION OF 3D MAGNETIC FIELD IN POWER TRANSFORMER.
M. Lovenjak, Elektrotehnicki Inst. R. Koncar Zagreb, Yugoslavia.

5.7 NUMERICAL ANALYSIS OF FLUX DISTRIBUTION IN PERMANENT MAGNET STEPPING MOTORS.
T. Nakata, N. Takahashi, K. Yoneda, Okayama University, Okayama, Japan.

6. HIGH ENERGY PHYSICS AND TOKAMAKS PANEL

6.1 COMPUTATION OF MAGNETIC FLUX AND CURRENT IN A TOKAMAK WITH AN IRON CIRCUIT.
J. Blum, R. Dei-Cas, J.P. Morera, CEN, Fontenay-aux-Roses, France.

6.3 COMPUTER DESIGN OF THE MAGNETIC FIELD OF A TRANSVERSE WIGGER.
A.U. Luccio, G. Passoti*, M. Ricci*, INFN, Frascati, Roma,* CNEN, Frascati, Roma, Italy.

6.4 SIMPLE MAGNETIC CALCULATIONS WITH COMMERCIAL FINITE ELEMENTS CODES.
R.J.B. Reefman, H.H.J. Lok, T.G.M. Harink Hazemeyer B.V., Hengelo, The Netherlands.

6.5 BENDING MOMENTS COMPUTATION IN SUPERCONDUCTING TOROIDAL COILS OF DIFFERENT SHAPES FOR TOKAMAK FUSION EXPERIMENTS, IN NORMAL AND FAULTY CONDITIONS.
M.V. Ricci, M. Caciotta*, F. Nesci*, CNEN, Frascati, Roma*, Universita di Roma, Roma, Italy.

6.6 HOMOGENEIZING SURFACE COILS FOR PRECISION MAGNETS.
H. Wollnik, U. Czok, G. Moritz, Justus-Liebig Universität, Giessen, Germany.

7. MAGNETODYNAMICS

7.1 ON SOME EXPERIMENTS WITH TIME DISCRETIZATION AND WITH MIXED FINITE ELEMENTS FOR THE NON LINEAR FIELD EQUATIONS.
O. Axelson, Chalmers University, Göteborg, Sweden.

7.3 CALCUL TRIDIMENSIONNEL DES COURANTS DE FOUCAULT DANS UN SOLIDE NON FERROMAGNETIQUE.
J.C. Vérité, EDF, Clamart, France.

7.4 FINITE-ELEMENT SOLUTION OF THREE DIMENSIONAL EDDY-CURRENT PROBLEMS IN ELECTRICAL MACHINES.
T.W. Preston, A.B.J. Reece, GEC, Stafford, England.

7.5 COMPUTATION OF TRANSIENT 3D EDDY-CURRENT IN NON MAGNETIC CONDUCTOR.
H.T. Yeh, Oak Ridge National Lab., Tennessee, USA.

7.6 ETUDE EN 3D D'UN FOUR A INDUCTION.
A. Foggia, Ecole Centrale de Lyon, Ecully, France.

8. COMPUTER-AIDED DESIGN

8.1 FORCES IN ELECTROMAGNETIC DEVICES.(invited)
B. Aldefeld, Philips, Hamburg, Germany.

8.2 AUTOMATIC PLANNING OF ELECTRICAL OR MAGNETIC EQUIPMENT STARTING FROM THE STUDY OF FIELDS.
A. Di Napoli, C. Mazetti, Universita di Roma, Italy.

8.3 MAGNETOSTATIC OPTIMUM DESIGN WITH LAGRANGIAN FINITE ELEMENTS. DESIGN OF A MAGNET.
A. Marrocco, O. Pironneau, Iria-Laboria, Le Chesnay, France.

8.4 CROSSTALK IN A FAM TECHNIQUE TELEPHONE SWITCHING NETWORK DUE TO SKIN EFFECT. APPROACH WITH THE FINITE ELEMENT METHOD.
C. Lonati, G.C. Macchi, D. Raveglia, Italtel, Milano, Italy.

8.5 APPLICATION OF THE METHOD OF PENALTY FUNCTION TO THE OPTIMIZATION OF THE MAGNETIZATION PROCESS.
S. Krzeminski, Warsaw Technological University, Poland.

9. MAGNETOSTATICS

Papers included in the
Proceedings without lecture

9.1 THE FIELD IN AN AIR-GAP, COMPUTED FROM EXTERNAL SOURCES
Masters D., Midgley D., University of Hull, England.

9.2 RESOLUTION DE L'EQUATION DE LAPLACE PAR UNE METHODE DE POTENTIEL AUX LIMITES.
Jufer M., Rémus H., Ecole Polytechnique Fédérale, Lausanne, Suisse.

9.3 FINITE ELEMENT MAGNETIC FIELD CALCULATION TAKING INTO ACCOUNT SATURATION AND HYSTERESIS.
Bassi E., Savini A., Gobetti A., Universita di Pavia, Italy.

9.4 PERMANENT MAGNET 3D FIELD COMPUTATION BY CURVILINEAR FINITE ELEMENTS.
Coulomb J.L., Meunier G., Rafinejad P., ENSEGP, Grenoble, France.

10. MAGNETODYNAMICS

Papers included in the
Proceedings without lecture

10.1 ESTIMATION OF EDDY-CURRENT LOSSES BY MEANS OF VARIATIONAL METHODS.
Purczynski J., Popow W., Sikora R., Gramz M., Polytechnic of Szczecin, Poland.

10.2 2D FINITE ELEMENT ANALYSIS OF LOW-FREQUENCY ELECTROMAGNETIC FIELDS IN LINEAR MEDIA.
Janecek P., ASEA, Vasteras, Sweden.

10.3 NUMERICAL SOLUTIONS OF EDDY-CURRENT PROBLEMS WITH BOUNDARY CONDITIONS VIA FREDHOLM EQUATIONS.
McWhirter J.H., Westinghouse, Pittsburgh, USA.

10.4 CALCULATION OF EDDY-CURRENTS INDUCED IN THIN CURVED SHEETS.
Gramz M., Purczynski J., Sikora R., Polytechnic of Szczecin, Poland.

10.5 EQUIVALENT CIRCUITS OF SOLID IRON CORE FOR TRANSIENT PROBLEMS.
Ioan D.C., Politechnical Institut, Bucharest, Romania.

10.6 CONVERGENT ALGORITHM FOR UNBOUNDED, TWO-DIMENSIONAL, LINEAR EDDY CURRENT PROBLEMS.
Steele C.W., Ampex, Redwood City, California, U.S.A.

10.7 GENERAL DISCRETE EQUATIONS FOR LAMINATED CORES.
Phemister T.G., Parsons, Newcastle upon Tyne, England.

11. COMPUTER AIDED DESIGN

Papers included in the
Proceedings without lecture

11.1 APPLICATION DE LA METHODE DES ELEMENTS FINIS AU CALCUL DES TURBO-ALTERNATEURS.
Nowak C., Université de Liège, Belgique.

11.2 AUTOMATIC MESH GENERATION IN MAGNETIC FIELD CALCULATION.
Melkes F., Research Inst. of Electrical Machines, Brno Czechoslovakia.

11.3 OPTIMISATION D'ENROULEMENTS ADAPTES AUX MESURES DE MAGNETO OPTIQUE : CAS D'UNE REPARTITION RADIALE OPTIMISEE DE LA DENSITE DE COURANT.
Blanchard P., Teissier M., Université de Lyon, France.

11.4 THE USE OF SPATIAL FOURIER TRANSFORMS AND PARSEVAL'S IDENTITY IN THE CALCULATION OF ELECTROMAGNETIC FORCES IN LINEAR INDUCTION DEVICES.
Freeman E.M., Papageorgiou C., Imperial College, London, England.